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Pavlidis, N ; Hansen, H ; Stahel, R

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ESMO clinical recommendations: a practical guide for medical oncologists

During the last two decades different clinical practice guidelines (CPGs) have been developed by various panels of experts. The major goals of CPGs are: (a) to serve as a guide by practitioners for appropriate clinical decision-making; (b) to improve the quality of health care and outcomes for patients; and (c) to support and influence regional or national authorities when deciding the allocation of resources. As Eisenberg points out, ‘one simple definition of quality in healthcare is providing the right care, at the right time, for the right person in the right way’ [1].

Producers of CPGs are based on the evidence-based medicine (EBM) system. EBM was first established in 1992 as a more scientific and systematic approach to the practice of medicine: ‘EBM is consider as the process of systematically finding, appraising and using contemporaneous research findings as the basis for clinical decisions. EBM is about asking questions, finding and appraising the relevant data, and harnessing information for everyday clinical practice’ (Table 1) [2–4].

In a recent systematic review of clinicians’ attitudes to clinical practice guidelines, 30 studies from 1990 to 2000 were analysed. Guidelines were focused on various medical or surgical topics and originated from Europe, the United States, Canada and Australia. Results showed that 70–75% of clinicians agreed

that guidelines were useful sources of advice, good educational tools and intended to improve quality in healthcare. In contrast, 30–53% of them also considered the guidelines to be impractical and too rigid to apply to individual patients as they might reduce doctors’ autonomy, oversimplify medicine and pave the way for litigation. In addition they might prohibit potential benefits for patients, as they might be intended to cut healthcare costs [5].

There is increasing concern about variation in guideline quality due to methodological problems, setting of criteria, priorities and so on. Recently Vigna-Taglianti et al. reported that the quality of approximately one-half of the systematic reviews used in guidelines for oncology practice is poor: 29% of them do not match the definition of systematic review and 21% follow unclear methodology. Four ESMO clinical recommendations for breast and colorectal cancer were also included in this analysis, indicating a similar weakness [6]. Over the years it has become evident that guidelines should be clearer about the context of their development and the methodology utilized. This is essential in order to improve the quality of guidelines and to encourage their use in daily clinical practice [7, 8].

A large number of organizations have developed practice guidelines in oncology at a national, regional or local level, including federal agencies, medical societies or other scientific groups. From international assessments of the quality of clinical practice guidelines, it has been shown that oncology

Table 1. Evidence-based medicine systems

Type of system	Description
Type C basis (general consensus)	There is a widespread consolidated consensus. Randomized trials have not been carried out or have been inadequate, but the issue is settled without major controversy; currently, no (further) experimental evidence is felt to be needed.
Type 1 evidence (randomized trial/s available, strong evidence)	Consistent results have been provided by more than one randomized trial, and/or a reliable meta-analysis was performed. In some instances, one randomized trial can be considered sufficient to support this type of evidence. Further confirmatory trials do not seem necessary.
Type 2 evidence (randomized trial/s available, weak evidence)	One or more randomized trials have been completed, but the evidence they provide is not considered definitive (their results are not consistent, and/or they are methodologically unsatisfactory, etc.). Some controlled evidence has therefore been provided, but confirmatory trials would be desirable.
Type 3 evidence (external controlled comparisons available)	Evidence is available from non-randomized studies, with external controls allowing comparisons. Some uncontrolled evidence has therefore been provided, but trials would be desirable.
Type R basis (rational inference)	Little or no direct evidence from clinical studies is available. Yet clinical conclusions can be rationally inferred from available data and knowledge (by rationally combining pieces of information from published studies and observations; e.g. for a rare neoplasm or presentation, through analogy with a related, more common tumour or presentation). The inference can be more or less strong, and trials may or may not be desirable (although sometimes unfeasible).

guidelines had significantly higher scores than non-oncology guidelines. From an assessment of the quality of 100 guidelines, including 32 oncology guidelines, using the Appraisal of Guidelines and Research and Evaluation (AGREE) Instrument, oncology guidelines seem to be of better quality than others (42.2% vs 29.4%; $P = 0.02$) [9].

In a national survey of Canadian oncologists' attitudes towards practice guidelines, over 80% of the respondents agreed that they were good educational tools, convenient sources of advice and intended to improve quality of care. Conversely, 42% felt that they were intended to cut costs, 26% that they were oversimplified 'cookbook' medicine, 20% that they were too rigid to apply to individual patients and 16% that they were a challenge to the physician's authority. Nevertheless, Canadian oncologists were quite positive about practice guidelines and reported using them frequently [10, 11].

In another study 1500 members of the American Society of Clinical Oncology (ASCO) were queried about (a) whether they had read the ASCO guidelines; (b) whether they agreed with the recommendations; (c) whether they used guidelines in clinical practice; and (d) how guidelines had affected reimbursement. It was found that ASCO guidelines were generally highly supported by physicians. Although they are read more often by oncologists in private practice, 25% of respondents reported that guidelines were difficult to apply to daily practice and 10% indicated that the guidelines were difficult to evaluate, interpret or read [12].

ESMO clinical recommendations

The European Society for Medical Oncology (ESMO) has developed and disseminated clinical recommendations to all European and non-European oncologists. ESMO's motivation was to establish the clinical recommendations, as it was felt they were important for the future development of medical oncology and for achieving high common standards of medical practice for patients in all European countries.

The original idea for the creation of the ESMO clinical guidelines came from Professor Heine H. Hansen via the Central European Task Force in 1998. In particular, he visualized the need for clinical recommendations that might be more practical in daily use. This was supported at a meeting of the ESMO national representatives, who felt that the development of guidelines would contribute to the standing of medical oncology in Europe.

Thus, in 1999 the ESMO Guidelines Task Force was constituted. Initially, the group began with a chairman (Rolf Stahel, Switzerland), a central coordinator (Lorez Jost, Switzerland), an ESMO officer (Maria Cristina Reinhart) and five members (Jørn Herrstedt, Denmark; Otto Kloeke, Germany; Nicholas Pavlidis, Greece; Gunta Purkalne, Latvia; and Svetislav Jelic, Yugoslavia). During the next 5 years more members joined the task force (Jonas Bergh, Sweden; Richard Greil, Austria; Vesa Kataja, Finland; and João Olivera, Portugal).

The clinical recommendations are an important expression of ESMO's mission to disseminate knowledge in order to

maintain a high common standard in medical practice for cancer patients. First, the guidelines are a tool for clinicians to help them offer the best care to their patients on a daily basis. They also help support negotiations with politicians, administrators and insurance companies regarding the level of care that should be made available. The principles of the ESMO clinical recommendations were: (a) to create a set of statements for an essential standard of care in no more than three pages; (b) to be disease- or topic-oriented; (c) to be evidence-based; (d) to have an emphasis on medical oncology; and (e) to be regularly updated.

Each of the ESMO clinical recommendations provides vital, evidence-based information for physicians, including the incidence of the malignancy, diagnostic criteria, staging of disease and risk assessment, treatment plans and follow-up.

Since 1 January 2006 the Guidelines Task Force has been an independent group—the ESMO Guidelines Working Group—under the new ESMO Education Committee structure. It consists: (1) of an editorial board with a chairman (Nicholas Pavlidis, Greece), three members (Rolf Stahel, Switzerland; Heine Hansen, Denmark; and Svetislav Jelic, Serbia), an *Annals of Oncology* executive (Lewis Rowett, UK) and an ESMO Officer (Paola Minotti, Switzerland), (2) of the seven subject editors responsible for the topics, the authors, the revision of the manuscripts and the presentation and discussion of final drafts with the editorial board (M. Castiglione, Switzerland; J. Oliveira, Portugal; E. Felip, Spain; V. Kataja, Finland; M. Dreyling, Germany; L. Jost, Switzerland; and F. Roila, Italy), (3) of the assigned authors and (4) of the five preselected reviewers per topic have all been ESMO faculty members (Figure 1).

Nearly 7 years after the inception of the ESMO Guidelines Task Force and up to the end of 2006, 39 clinical recommendations were freely available on the ESMO website [13] and in *Annals of Oncology*. The future intention is to cover not only most of the malignant tumours, but also other topics in oncology.

The current activities of the ESMO Guidelines Working Group include: (a) generation of yearly updates and new guidelines through an online process; (b) yearly publication of ESMO clinical recommendations as supplements to *Annals of Oncology*; (c) interactive guideline sessions at ESMO congresses; and (d) promotion of ESMO clinical recommendations.

In a Letter to the Editor in 2002, Fervers et al. criticized ESMO clinical recommendations concerning their strategy and quality as well as their ability to influence oncology practice [14]. Our answer to this criticism is that the ESMO clinical recommendations are built on a philosophy of providing basic and practical information to oncologists and protecting them from 'what and how not to do things'. The formulation of ESMO clinical recommendations is always made according to the principles of evidence-based medicine and, according to the new structure of the working group, every single clinical recommendation is assigned to a specific subject editor, is written by an expert author and is reviewed by five independent multidisciplinary external reviewers.

dissemination and implementation of ESMO clinical recommendations

Three different methodological tools were used in order to evaluate the spectrum of dissemination and implementation of ESMO clinical recommendations. The first was the evaluation scoring from the interactive guidelines sessions at ESMO congresses. The second was a survey/questionnaire given during the 31st ESMO Congress. This questionnaire had been designed by Johns Hopkins University, Baltimore, in 1994 and mailed to members of the American College of Physicians (ACP) to assess their familiarity, confidence and attitudes relating to guidelines issued by the ACP [15]. The third tool was the extraction of 12 months' data from downloads of Oxford Journals usage statistics through the supplementary issue of *Annals of Oncology* in which the 2005 ESMO guidelines were published [16].

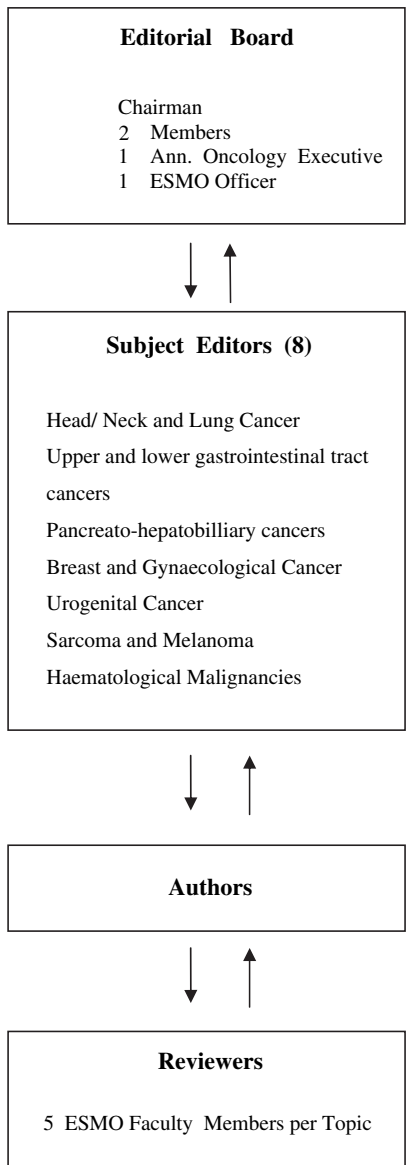


Figure 1. The new structure of the ESMO Guidelines working group.

results from the evaluation of the ESMO guidelines sessions

The last four (2000–2006) ESMO congresses conducted 2-hour interactive sessions on ESMO guidelines, where different cases with various tumours were presented and discussed, based on the ESMO clinical recommendations. The average evaluation scoring of all sessions is shown in Table 2. It is apparent that over the years this activity has been getting a steadily higher recognition from the European as well as the international oncological community.

results from the questionnaire

During the 31st ESMO Congress in Istanbul in 2006 an interactive session with six case presentations was held. Both at the onset as well as at the closure of the session, the audience was asked to answer ten questions through an electronic voting system (Table 3). The first three questions, asked at the onset, were related to audience exposure to ESMO clinical recommendations, while the seven questions asked at the end of the session were taken from the survey of Tunis et al. [15]. At the beginning more than 600 participants answered. Among them 61.1% were medical oncologists, 12.4% clinical oncologists, 6.1% radiation oncologists and 4.6% surgical oncologists, and the rest (15.7%) belonged to various other specialties.

From the analysis of the questionnaire it was encouraging to see that half of the attendees had consulted ESMO clinical recommendations over the last year and one-third had consulted them more than once. Several factors might contribute to the fact that half of the attendees had not yet consulted ESMO clinical recommendations. It could be that some attendees at the ESMO Congress were not ESMO members; some might not have been aware of the guidelines; also, more young oncologists are attending the interactive

Table 2. Evaluation of ESMO interactive guideline sessions

Date and place of congress	Subjects discussed	Average score ^a
2000, Hamburg	Colon cancer	3.78
	Non-small cell lung cancer	
2002, Nice	Testicular cancer	4.05
	Cancer of unknown primary	
	Ovarian cancer	
	Prostate cancer	
2004, Vienna	Breast cancer (metastatic)	4.07
	Follicular lymphoma	
	Rectal cancer	
2006, Istanbul	Breast cancer (adjuvant)	4.24
	Non-small cell lung cancer	
	Hodgkin's lymphoma	

^aOn a scale of 1 to 5.

Table 3. Analysis of the audience questionnaire administered during the 31st ESMO Congress, Istanbul 2006

Question	Responses	Percentage response
1. How many times have you attended the ESMO CR sessions during ESMO congresses (2000–2006)?	Once	64.7% (417/641)
	Twice	19.5% (125/641)
	Three times	9.1% (58/641)
	Four times	6.6% (43/641)
2. Within the last year how many times have you consulted the ESMO CRs?	Not at all	51.7% (333/644)
	Once	15.1% (97/644)
	<10 times	25.9% (167/644)
	>10 times	7.3% (47/644)
3. What is your preferred access to ESMO CRs?	<i>Annals of Oncology</i>	37.5% (250/666)
	ESMO website	62.5% (416/666)
4. Do you think ESMO CRs are a helpful source of advice?	Yes	80.8% (143/177)
	No	6.8% (12/177)
	Don't know/no answer	12.4% (22/177)
5. Do you think ESMO CRs are good educational tools?	Yes	84.9% (140/165)
	No	7.9% (13/165)
	Don't know/no answer	7.3% (12/165)
6. Do you think ESMO CRs are intended to improve quality of care?	Yes	94.8% (146/154)
	No	1.3% (2/146)
	Don't know/no answer	3.9% (6/146)
7. Do you think ESMO CRs are intended to cut health care costs?	Yes	32.9% (48/146)
	No	40.4% (59/146)
	Don't know/no answer	26.7% (39/146)
8. Do you think ESMO CRs will increase litigation or disciplinary action?	Yes	40.9% (61/149)
	No	38.3% (57/149)
	Don't know/no answer	20.8% (31/149)
9. Do you think ESMO CRs reduce physicians' autonomy and are oversimplified or 'cookbook' medicine?	Yes	20.3% (30/148)
	No	74.3% (110/148)
	Don't know/no answer	5.4% (8/148)
10. Do you think ESMO CRs are impractical and too rigid to apply to individual patients?	Yes	12.6% (18/143)
	No	81.8% (117/143)
	Don't know/no answer	5.6% (8/143)

CRs, clinical recommendations.

sessions every year. More than 60% of the attendees preferred to have access to ESMO clinical recommendations through the ESMO website.

More than 80% of the respondents felt that ESMO clinical recommendations were a helpful source of advice and 85% believed that they were a good educational tool. Almost all attendees (95%) thought that ESMO clinical recommendations were intended to improve patients' quality of care, 40% did not agree that they were intended to cut health care costs and 41% thought they would increase litigation or disciplinary action. It is important to notice also that 75% of respondents did not support the notion that ESMO clinical recommendations reduced physicians' autonomy and almost

82% did not believe that they were too rigid or impractical to be used. Taken together, the results of this inquiry are in keep with the results of the systematic review of Farquhar et al. [5].

results from annals of oncology downloads

When we extracted data from the downloads of Oxford Journals usage statistics through the 2005 supplementary issue of *Annals of Oncology* [14] from 1 January 2006 to 31 December 2006, a total of 66831 downloads were detected. The three most commonly downloaded tumour-related topics were 'primary breast cancer' (4707 downloads), 'primary colon cancer' (3395 downloads) and 'metastatic breast cancer' (3089 downloads), while the three least commonly downloaded topics were 'relapsed large-cell NHL' (1355 downloads), 'osteosarcoma' (1251 downloads) and 'Ewing's sarcoma' (1247 downloads).

perspectives

Supporting a wide spectrum of cancer doctors (i.e., practitioners or hospital physicians) with the ESMO clinical recommendations remains our first priority. The ESMO Guidelines Working Group feels that the clinical recommendations have been successfully recognized by European and non-European oncologists. The simple format and yearly updates of the ESMO clinical recommendations and the free access via the internet have probably contributed to this. In addition, the ESMO Guidelines Working Group will continue to present yearly updates, and it is also planning to develop 17 additional guidelines over the next 2 years, including guidelines on several rare cancers. We intend also to keep the interactive guidelines session at every ESMO congress.

It is important to notice that the ESMO guidelines have already been translated into several languages (French, German, Italian, Spanish, Portuguese, Russian, Japanese and Chinese) and the working group will continue to encourage such efforts. Another task of the working group is to disseminate ESMO guidelines to any scientific or educational institution in Europe. Also, placing reports and publications in various newsletters or journals and participating in lectures at various oncology meetings will be strongly emphasized.

ESMO guidelines are not competing with other national or international guidelines but are complementary recommendations to other existing guidelines. Our ultimate goal is to provide practical, annually updated basic recommendations covering all tumour types and our vision is to ensure that ESMO guidelines are introduced and continue to be used in day-to-day practice.

N. Pavlidis^{1*}, H. Hansen² & R. Stahel³

¹Department of Medical Oncology, Medical School, University of Ioannina, Greece, ²The Finsen Center, Copenhagen University Hospital, Denmark,

³University Hospital of Zurich, Department of Oncology, Zurich, Switzerland

*(npavlid@cc.uoi.gr)

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